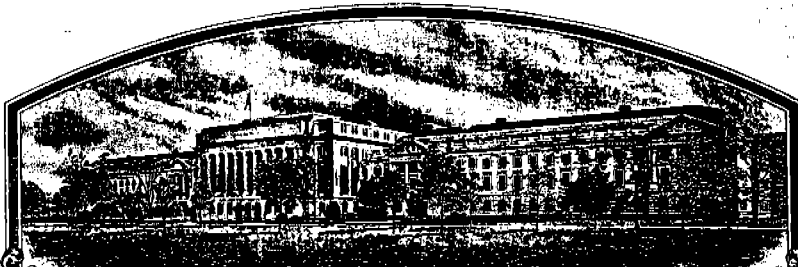


No.

7800013



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

North American Plant Breeders

Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *seventeen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS SEED OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'Rocky'

In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington
this *tenth* day of August in
the year of our Lord one thousand nine
hundred and seventy-eight

Attest

[Signature]
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

[Signature]
Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
PLANT VARIETY PROTECTION OFFICE
NATIONAL AGRICULTURAL LIBRARY
BELTSVILLE, MARYLAND 20705

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

1a. TEMPORARY DESIGNATION OF VARIETY NAPB 1316-76	1b. VARIETY NAME ROCKY	FOR OFFICIAL USE ONLY PV NUMBER 7800013	
2. KIND NAME Hard Red Winter Wheat	3. GENUS AND SPECIES NAME Triticum aestivum	FILING DATE 12-27-77	TIME 9:00 A.M.
4. FAMILY NAME (BOTANICAL) Gramineae	5. DATE OF DETERMINATION August, 1976	FEE RECEIVED \$250.00 \$250.00 \$250.00	DATE 12-27-77 12-27-77 7-11-78
6. NAME OF APPLICANT(S) North American Plant Breeders	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 5201 Johnson Drive Mission, Kansas 66205	8. TELEPHONE AREA CODE AND NUMBER 913-384-4940	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Partnership		10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Connecticut	11. DATE OF INCORPORATION March 9, 1973
12. Name and mailing address of applicant representative(s), if any, to serve in this application and receive all papers: Giles E. Dixon, Research Director North American Plant Breeders 5201 Johnson Drive P.O. Box 2955 Mission, Kansas 66205			

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☒ 13D. Exhibit D, Additional Description of the Variety.

14A. Does the applicant(s) specify that seed of this variety be sold by variety name only as a class of certified seed?
(See Section 83(a). (If "Yes," answer 14B and 14C below.) ☒ YES ☐ NO

14B. Does the applicant(s) specify that this variety be limited as to number of generations?

☒ YES ☐ NO

14C. If "Yes," to 14B, how many generations of production beyond breeder seed?

☒ FOUNDATION☒ REGISTERED☒ CERTIFIED

15. Does the applicant(s) agree to the publication of his/her (their) name(s) and address in the Official Journal?

☒ YES ☐ NO

16. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be deposited upon request before issuance of a certificate and will be replenished periodically in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

Oct-24 1977.

(DATE)



(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

INSTRUCTIONS

GENERAL: Send an original copy of the application, exhibits and \$250.00 fee to U.S. Dept. of Agriculture, Agricultural Marketing Service, Grain Division, National Agricultural Library, Beltsville, Maryland 20705. (See Section 180.175 of the regulations and rules of practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in Section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give (1), the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method. (2), the details of subsequent stages of selection and multiplication. (3), the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4), evidence of stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties; (1) identify these varieties and state all differences objectively; (2) Attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form for all characteristics, for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe; such as; plant habit, plant color, disease resistance, etc.
- 14A If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled or published or the certificate has been issued. However, if the applicant specifies "NO", he may change his choice. (See Section 180.15 of the Regulations and Rules of Practice.)

EXHIBIT A

Origin and Breeding History of Rocky

PEDIGREE: Kenya 58/2/Newthatch/3/Hope/2* Turkey/4/Cheyenne/5/Parker.

DATE OF CROSS: 1959 - Lincoln, Nebraska

HISTORY: Rocky originated as a plant selection out of the variety Centurk (NB66425 - CI15075) in 1974. It is one of the one-hundred selected plants grown at Berthoud, Colorado, and Hutchinson, Kansas in 1975. Rocky was selected at Hutchinson because of its obvious resistance to soil borne mosaic virus. The plots at Berthoud were rogued for off-types and put into regional yield trials in 1976. At Berthoud in 1976 a plot of Rocky (NHRW 1316-76) was carefully rogued for initial increase. In 1977, this seed was put in regional and state trials and increased and rogued under foundation seed requirements to 140 50-pound units. In 1978, a 4,000 unit increase is expected for registered seed.

Our purification program considers Rocky a very stable genotype. In contrast to Centurk, very few variants have been detected in purification plots.

EXHIBIT B

Data Indicative of Novelty of Rocky

1. Beak length

Rocky is in general most similar to the variety Centurk as it is a selection from Centurk.

Beak length of Rocky is shorter than Centurk. Beak length was measured on spikelets from the central 1/3 of heads to minimize within head

variation. 50 measurements were made on heads of Centurk and Rocky grown under similar conditions. The data are as follows:

	<u>Rocky</u>	<u>Centurk</u>
Ave. beak length	3.32 mm	4.64 mm
Confidence interval (.99)	$\pm .429\text{mm}$	$\pm .752\text{mm}$

The data thus indicate distinctly different beak lengths. Stability of beak length is also quite different for the two varieties. Variance of beak length for Rocky is only 1.28 mm while it is 4.02 mm for Centurk.

2. Soil Borne Mosaic Virus (SBMV)

Soil borne mosaic virus resistance of Rocky is superior to Centurk. In our SBMV nursery in Hutchinson, Kansas in 1977, we visually rated Rocky and Centurk on a 1 = very resistant to a 9 = very susceptible scale. Eight ratings were made of Rocky and compared to sixteen ratings for Centurk.

Rocky Mean Rating	Centurk Mean Rating
2.13	3.13

When readings were put through analysis of variance, a 7.94 F ratio was needed to be significant at the 1% level. The F ratio was 44.70.

3. Yield plus SBMV

Rocky's yield advantage over Centurk in fields infected with SBMV averaged 28%, whereas the advantage in fields free of SBMV ranges from 10 - 17%. (Tables 1 & 2).

Table 1

NAPB Performance Data Comparing Rocky with Centurk at Soil Borne Mosaic Virus Infected Field, Hutchinson, Kansas 1976. (10 entries in trial - 4 replications).

	<u>% Yield over Centurk</u>	
Centurk	54.7 bu/acre	
Rocky	69.8 bu/acre	28
LSD 05	7.1 bu/acre	

Table 2

Performance Data Comparing Rocky with Centurk
in NAPB trials 1976-77 (6 location years).

	<u>Yield in % of Centurk</u>		<u>Test Wt. in lbs/bu</u>	
	<u>1976</u> (3 loc.)	<u>1977</u> (3 loc.)	<u>1976</u>	<u>1977</u>
Rocky	117	110	57.3	58.3
Centurk	100	100	57.2	58.0

4. Phenol Reaction

Phenol reaction tests that were completed 2/10/78 are summarized as follows:

<u>Variety</u>	<u>Color</u>	<u>Color Code</u>
Centurk	Black	5
Rocky	Light Brown	3

EXHIBIT D

Additional Description of Rocky

Botanical description of the mature plant and seed of Rocky is as follows:
Plant winter-habit, early; height, intermediate-short; stem white, mid-strong;
spike awned, fusiform to oblong, mid-dense; glumes glabrous, white, short;
beaks acuminate, short; kernels hard, red, short, ovate.

Spring growth would be very similar to Centurk with the exception of
heading date which is usually one day later and mature height which is
usually one inch taller. Rocky has the same blocky and highly fertile head
as Centurk. Beak length is the only significant trait that differs from
Centurk at maturity.

The seed of Rocky is usually smaller than most commonly grown wheat varieties,
most similar to Centurk. Fall growth is rapid being slightly more upright
and a lighter color than Centurk.

Wheat Application - No. 7800013 - 'Rocky'

Additional information is herewith submitted to complete Exhibit A (3). All obvious off-types, which include height, maturity, plant color, and head shape, have been removed from the parent population during the plant-row purification period. The frequency of off-types removed during purification was less than 1%.

So far as we know the only variants that remain in the population are minor differences in shoulder and beak lengths.

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)		FOR OFFICIAL USE ONLY
<u>North American Plant Breeders</u> ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code) 5201 Johnson Drive P.O. Box 2955 Mission, Kansas 66205		PVPO NUMBER 7800013 VARIETY NAME OR TEMPORARY DESIGNATION Rocky
<div>Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in first box (e.g., 089 or 09) when number is either 99 or less or 9 or less.</div>		
1. KIND: <div>1 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB</div>		
2. TYPE: <div>2 1 = SPRING 2 = WINTER 3 = OTHER (Specify) _____ 2 1 = SOFT 3 = OTHER (Specify) _____ 2 1 = WHITE 2 = RED 3 = OTHER (Specify) _____ 2 2 = HARD</div>		
3. SEASON - NUMBER OF DAYS FROM JANUARY 1: <div>142 FIRST FLOWERING 147 LAST FLOWERING</div>		
4. MATURITY (50% Flowering): <div> NO. OF DAYS EARLIER THAN 1 = ARTHUR 2 = SCOUT 3 = CHRIS 02 NO. OF DAYS LATER THAN 2 4 = LEMHI 5 = NUGAINES 6 = LEEDS</div>		
5. PLANT HEIGHT (From soil level to top of head): <div>094 CM. HIGH CM. TALLER THAN 1 = ARTHUR 2 = SCOUT 3 = CHRIS 08 CM. SHORTER THAN 2 4 = LEMHI 5 = NUGAINES 6 = LEEDS</div>		
6. PLANT COLOR AT BOOTING (See reverse): <div>2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN</div>		7. ANTHUR COLOR: <div>1 1 = YELLOW 2 = PURPLE</div>
8. STEM: <div>2 Anthocyanin: 1 = ABSENT 2 = PRESENT 2 Waxy bloom: 1 = ABSENT 2 = PRESENT 2 Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT 1 Internodes: 1 = HOLLOW 2 = SOLID 03 NO. OF NODES (Originating from node above ground) 17 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW</div>		
9. AURICLES: <div>2 Anthocyanin: 1 = ABSENT 2 = PRESENT 2 Hairiness: 1 = ABSENT 2 = PRESENT</div>		
10. LEAF: <div> Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 2 Flag leaf: 1 = NOT TWISTED 2 = TWISTED 1 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT MM. LEAF WIDTH (First leaf below flag leaf) 15 CM. LEAF LENGTH (First leaf below flag leaf)</div>		

WHEAT

CLASS: Hard Red Winter

NAME: Rocky

NOMENCLATURE: *Triticum aestivum*

CI NO:

RELEASED:

REGISTRATION NO:

SELECTION NO: NAPB 1316-76

PEDIGREE: Selection from Centurk ..

CULTIVAR DESCRIPTION: Rocky is a hard red winter wheat that has white glumes and awns. Rocky is similar to Centurk in most characteristics but differs in glume shape and has better resistance to soil borne mosaic.

ADAPTATION AND CHARACTERISTICS: Rocky is adapted to the same areas as Centurk but has superior yields. Soil borne mosaic resistance is superior to Centurk and heading is about 1 day later.

GENERAL INFORMATION: Rocky was selected from Centurk on the basis of improved soil borne resistance. Rocky is similar to Centurk in most agronomic and quality characteristics. Rocky was developed by NAPB (Larry Robertson), Berthoud, Colorado, 80513.

OTHER SOURCES OF INFORMATION: North American Plant Breeders
5201 Johnson Drive
Mission, Kansas 66205

REGISTRATION NO. _____

VARIETY NAME Rocky

Test Results Based on the American Association of Cereal
Chemists Approved Method (AACC)

1. Straight dough development time:

Farino graph 8.5Dough-Mixer 5.0

2.

Baking Ingredients	Arrival time-- minutes	Peak time	Stability-- minutes	Curve center height B.U.	Height at end B.U.
Yeast	2.25	8.5	30.0	500	460
No rest					
4 hr. rest					

Wheat
3. Protein percentage 13.65%

Flour percentage 12.3%



P.O. BOX 30 □ 806 NORTH SECOND ST. □ BERTHOUD, COLORADO 80513 □ (303) 532-3721

June 6, 1978

Larry W. Dosier
Examiner, Plant Variety
Protection Office
Grain Division
US Department of Agriculture
National Agricultural Library
Beltsville, Maryland 20705

Dear Mr. Dosier:

I am responding to your inquiry about Rocky Winter Wheat that you had requested of Mr. Giles Dixon, Research Director at Mission, Kansas. Mr. Dixon is away on leave. I will answer your questions in the order that you asked.

1. Presence or absence of anthocyanin in the stems.

Anthocyanin is affected by many environmental factors including light, temperature and moisture. Our stem anthocyanin notes were taken twice; during the early growth stages from the period to where the stem is extending to the point where the second node is visible above the ground; and again at plant ripening. Both stages expressed "slight" anthocyanin present and according to Bernard Leese, anthocyanin expressed under "any" conditions indicated a present response. According to "Classification of Triticum Species of Wheat Varieties Grown in United States" technical bulletin 1278 USDA, "All varieties of wheat are here classified as having white or purple stems." The color is usually most distinct on the peduncle or uppermost internode supporting the spikes but often continuous downward to the sheaths of the lower leaves. Therefore, according to this

interpretation while the plant color at maturity would be described in the white category (actually a cream color), the stem even with slight anthocyanin expressed one season would be considered purple. However, we consider Rocky and Centurk to be similar in anthocyanin response.

2. Color and vitreousness of kernels.

Rocky is a hard red winter wheat. The sample that we sent to you was from our Foundation seed source. This field was irrigated and the plants were weathered prior to harvest. The chalkiness of your sample is not characteristic but this was the only pure seed source we had to send to you. After this harvest we will replace your sample with one which better represents Rocky.

3. Narrow vs. mid-wide crease.

We have checked closely the sample of Rocky sent to you (PVP) for the crease width question. We have compared Rocky with the examples suggested on the PVP patent and would still consider it to fall into the mid-wide classification, however we do realize that this is a very subjective question and if Bernard Leese as chief examiner considers it to fall into the narrow category the patent should be changed.

4. Twisted flag leaf.

The terminal or flag leaf of Rocky is morphologically the same as Centurk but I would question the Centurk patent describing it as not twisted.

5. Juvenile growth habit.

We consider the juvenile growth habits on Rocky and Centurk as one and the same type, that being semi-erect. We realize that Centurk is patented as a prostrate type and occasionally commercially grown varieties are mixtures with respect to growth habit and this may be the case with Centurk.

Page 3
June 6, 1978

6. Brush length.

Brush hairs on Rocky and Centurk when measured under a microscope using the standards set from "Classification of Triticum Species and of Wheat Varieties Grown in the United States" technical bulletin 1278 USDA were found to be from 0.5 to 1 mm long placing them both in the midlong category, (the seed sample measured was the same seed source as the sample sent you the first part of this year).

I hope this has clarified your questions.

Sincerely,



ROBERT E. HEINER
Director of Cereal Breeding

REH/eh

cc: G. E. Dixon
Christine Bruns

11. HEAD:

☐ 2 Density: 1 = LAX 2 = DENSE
 ☐ 1 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
 4 = OTHER (Specify) _____

☐ 4 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

☐ 2 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
 5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____

☐ 0 ☐ 9 CM. LENGTH
 ☐ 1 ☐ 0 MM. WIDTH

12. GLUMES AT MATURITY:

☐ 1 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.)
 3 = LONG (CA. 9 mm.)
 ☐ 2 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)
 3 = WIDE (CA. 4 mm.)

☐ 2 Shoulder 1 = WANTING 2 = OBLIQUE 3 = ROUNDED
 shape: 4 = SQUARE 5 = ELEVATED 6 = APICULATE
 ☐ 3 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

☐ 1 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

☐ 1 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

☐ 2 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

☐ 1 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL
 ☐ 1 Cheek: 1 = ROUNDED 2 = ANGULAR

☐ 2 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG
 ☐ 1 Brush: 1 = NOT COLLARED 2 = COLLARED

☐ 3 Phenol reaction 1 = IVORY 2 = FAWN 3 = LT. BROWN
 (See instructions): 4 = BROWN 5 = BLACK

☐ 3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

☐ 0 ☐ 7 MM. LENGTH
 ☐ 0 ☐ 3 MM. WIDTH
 ☐ 3 ☐ 0 GM. PER 1000 SEEDS

17. SEED CREASE:

☐ 2 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'
 2 = 80% OR LESS OF KERNEL 'CHRIS'
 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'
 ☐ 2 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'
 2 = 35% OR LESS OF KERNEL 'CHRIS'
 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 1 STEM RUST (Races) field infection
 ☐ 2 LEAF RUST (Races)
 ☐ 0 STRIPE RUST (Races)
 ☐ 0 LOOSE SMUT

☐ 0 POWDERY MILDEW
 ☐ 0 BUNT
 ☐ OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

☐ 0 SAWFLY
 ☐ 0 APHID (Bydv.)
 ☐ 0 GREEN BUG
 ☐ 0 CEREAL LEAF BEETLE

☐ OTHER (Specify) _____
 HESSIAN FLY RACES:
 ☐ 0 GP
 ☐ 0 A
 ☐ 0 B
 ☐ 0 C

☐ 0 D
 ☐ 0 E
 ☐ 0 F
 ☐ 0 G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Centurk	Seed size	Centurk
Leaf size	Centurk	Seed shape	Centurk
Leaf color	Centurk	Coleoptile elongation	Centurk
Leaf carriage	Centurk	Seedling pigmentation	Centurk

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(a) L.W. Briggie and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.

(b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

BILL OF SALE AND ASSIGNMENT

KNOW ALL MEN BY THESE PRESENTS that AGRIPRO BIOSCIENCES INC., a Delaware corporation (hereinafter referred to as "Seller"), pursuant to that certain Asset Purchase Agreement of even date herewith by and between Seller and AGR ACQUISITION CORPORATION, a Delaware corporation (hereinafter referred to as "Buyer") and for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, does hereby grant, bargain, sell, assign, convey and deliver unto Buyer, all of Seller's right, title and interest in and to the plant varieties owned/registered by Seller and more particularly set forth on Exhibit A attached hereto for which PVP Certificates have been issued by or may be pending before the U. S. Department of Agriculture.

TO HAVE AND TO HOLD UNTO PURCHASER, its successors and assigns forever.

IN WITNESS WHEREOF, Seller has executed this Bill of Sale and Assignment as of the 30th day of June, 1994.

AGRIPRO BIOSCIENCES INC.

BY: W.A. Zama
Title: President

STATE OF KANSAS, COUNTY OF JOHNSON

Before me, the undersigned, a Notary Public of the State and County aforesaid, personally appeared W.A. ZAMA with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence) and who, upon oath, acknowledged himself to be the PRESIDENT of Agripro Biosciences Inc., the within named bargainor, a corporation, and that he as such PRESIDENT, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as PRESIDENT.

WITNESS my hand and Notarial Seal at office the day and year above written.

Alma M. Weaver
Notary Public

My Commission Expires:

June 22, 1998

ALMA M. WEAVER
NOTARY PUBLIC
STATE OF KANSAS

My Appt. Exp.

June 22, 1998

Office of the Secretary of State

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "AGR ACQUISITION CORPORATION", CHANGING ITS NAME FROM "AGR ACQUISITION CORPORATION" TO "AGRIPRO SEEDS, INC.", FILED IN THIS OFFICE ON THE THIRTIETH DAY OF JUNE, A.D. 1994, AT 4:30 O'CLOCK P.M.

A CERTIFIED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS FOR RECORDING.



Edward J. Freel

SECRETARY OF STATE
AUTHENTICATION:

7169071

DATE:

07-01-94

2394087 8100

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06/30/94 14:25 0913 384 0208

ABI SHAWNEE MSN

002/002

CERTIFICATE OF AMENDMENT
OF
CERTIFICATE OF INCORPORATION
OF
AGR ACQUISITION CORPORATION

AGR Acquisition Corporation, a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware,

DOES HEREBY CERTIFY:

FIRST: that the Board of Directors of said corporation, by the unanimous written consent of its members filed with the minutes of the Board, adopted a resolution proposing and declaring advisable the following amendment to the Certificate of Incorporation of said corporation:

RESOLVED, that the Certificate of Incorporation of this corporation be amended by changing the Article thereof numbered "ARTICLE I" so that, as amended, said Article shall be and read as follows:

"ARTICLE I

Name

The name of the corporation (hereinafter called the 'Corporation') is Agripro Seeds, Inc."

SECOND: That in lieu of a meeting and vote of stockholders, the sole shareholder of the corporation has given unanimous written consent to said amendment in accordance with the provisions of Section 228 of the General Corporation Law of the State of Delaware.

THIRD: That the aforesaid amendment was duly adopted in accordance with the applicable provisions of Sections 242 and 228 of the General Corporation Law of the State of Delaware.

FOURTH: That the capital of said corporation shall not be reduced under or by reason of said amendment.

IN WITNESS WHEREOF, said AGR Acquisition Corporation has caused this certificate to be signed by Gary T. Hancock, its President, and attested by Ann Steelman, its Secretary, this 30th day of June, 1994.

AGR ACQUISITION CORPORATION

BY: Gary T. Hancock
Gary T. Hancock, President

ATTEST:

BY: Ann Steelman
Ann Steelman, Secretary

LAW OFFICES

LUCIUS E. BURCH, JR.
W. J. MICHAEL CODY
JOEL PORTER
CHARLES F. NEWMAN
C. THOMAS CATES
JOE M. DUNCAN
JOHN A. STEINLE
J. BROOKS LATHAM
JEFF FEIBELMAN
DEWITT M. SMY, JR.
R. MICHAEL POTTER
JOHN W. CHANDLER, JR.
DAVID J. HARRIS
WARNER B. HODDA
DAVID H. LILLARD, JR.
MOLLY K. LILLARD
SAM L. CRAIN, JR.
NATHAN A. BICAS

STEPHEN D. CRAWLEY
LAUREL C. WILLIAMS

BURCH, PORTER & JOHNSON

130 NORTH COURT AVENUE

MEMPHIS, TENNESSEE 38103

TELEPHONE 901-523-2311

TELECOPIER 901-523-7140

July 25, 1994

CHAS. N. BURCH 1888-1938
H. D. MINOR 1888-1947
CLINTON H. MCKAY 1888-1943
JESSE E. JOHNSON, JR. 1913-1980
JOHN S. PORTER 1909-1980

MORGAN KEEGAN OFFICE
30 NORTH FRONT STREET
SUITE 850
MEMPHIS, TENNESSEE 38103
TELEPHONE 901-527-2311
TELECOPIER 901-527-4190

Ms. Ann Zempolich
Plant Variety Protection Office
U. S. Department of Agriculture
500 NAL Building
10301 Baltimore Boulevard
Beltsville, MD 20705

Re: Agripro Biosciences Inc. Sale of PVPs to AGR Acquisition Corporation (which has changed its name to Agripro Seeds, Inc.)

Dear Ms. Zempolich:

I am enclosing herewith the Bill of Sale and Assignment wherein Agripro Biosciences Inc. has sold and assigned all of its right, title and interest in and to the PVPs listed on the attachment to the Bill of Sale to AGR Acquisition Corporation and hereby request that your records be changed to show the new owner as Agripro Seeds, Inc., the new name of AGR Acquisition Corporation. It is our understanding that the attachment was generated by someone in your office and forwarded to Agripro Biosciences Inc. at its request, and was subsequently forwarded to our office as attorneys for the purchaser in connection with the sale transaction.

As I indicated to you in our several previous telephone conversations, AGR Acquisition Corporation changed its corporate name to Agripro Seeds, Inc. the same date as the closing of the sale. I am enclosing herewith a copy of the Certificate of Amendment filed by the Delaware Secretary of State wherein the corporate name is changed.

If I counted correctly, there are 149 PVP certificates listed on the attachment to the Bill of Sale and Assignment. I am enclosing a check in the amount of \$3,725.00 payable to United States Treasury in payment of the \$25.00 per certificate fee to change the owner's name on your records.

THIS DOCUMENT HAS A COLORED BACKGROUND - NOT A WHITE BACKGROUND

THIS DOCUMENT HAS A COLORED BACKGROUND



HELENA CHEMICAL COMPANY
Suite 3200 - Clark Tower
5100 Poplar Avenue
Memphis, Tennessee 38137

DATE

CHECK NUMBER

7-8-94

22406

PROTECTION
AMOUNT

PAY EXACTLY **3,725.00**

PAY THIS AMOUNT

\$3,725.00

United States Treasury

PAY TO THE
ORDER OF

HELENA CHEMICAL COMPANY

by

Byn Tahn

AUTHORIZED SIGNATURES



AGRIPRO BIOSCIENCES INC.

September 27, 1990

COLUMBIA GRAIN COMPANY
800 Cresent Drive
Great Falls, MT 59403

Gentlemen:

We have received a report that you are offering for sale wheat seed by variety name Rocky. Rocky is protected by the Plant Variety Protection Act (PVPA) and Title V of the Federal Seed Act. This protection provides that the seed can only be advertised, offered for sale or sold by variety name as a class of certified seed.

Our representative has contacted you regarding this and has confirmed this is the case.

ABI is the owner of this variety and we, therefore, demand that you immediately cease and desist from selling this variety for seeding purposes. You are in violation of our patent rights and may also be in violation of the Federal Seed Act and State Seed Laws.

In addition, PVPA provides that the owner of a protected variety can seek civil action through the courts against anyone who infringes upon the owner's variety protection rights. An example of infringement would be: if you plant a protected variety, harvest the seed, and offer it for sale to the public as planting seed without the variety owner's consent.

We have enclosed more information about this law. If you do wish to sell certified seed of Rocky, seed is available from many AgriPro associates or dealers.

Sincerely,

Keith Flynn
Intellectual Property
Protection Manager
KF/ih

CC:

6700 Antioch, P.O. Box 2955

Shawnee Mission, KS 66201-1355

Phone (913) 384-4940

Telex 4941051 Fax (913) 384-0208

U. S. PVP OFFICE
Columbia Grain - Conrad
Plant Industrial Div.
Montana Dept. of Ag.
Bob Knudson

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

North American Plant Breeders

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)

5201 Johnson Drive
P.O. Box 2955
Mission, Kansas 66205

FOR OFFICIAL USE ONLY

PVPO NUMBER 7800013

VARIETY NAME OR TEMPORARY
DESIGNATION

Rocky

Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in first box (e.g., or) when number is either 99 or less or 9 or less.

1. KIND:

 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

 1 = SPRING 2 = WINTER 3 = OTHER (Specify) 1 = SOFT 3 = OTHER (Specify)
2 = HARD 1 = WHITE 2 = RED 3 = OTHER (Specify)3. SEASON - NUMBER OF DAYS FROM ~~EMERGENCE~~ TO January 1: FIRST FLOWERING LAST FLOWERING

4. MATURITY (50% Flowering):

 NO. OF DAYS EARLIER THAN 1 = ARTHUR 2 = SCOUT 3 = CHRIS
4 = LEMHI 5 = NUGAINES 6 = LEEDS

5. PLANT HEIGHT (From soil level to top of head):

 CM. HIGH
 CM. SHORTER THAN 1 = ARTHUR 2 = SCOUT 3 = CHRIS
4 = LEMHI 5 = NUGAINES 6 = LEEDS

6. PLANT COLOR AT BOOTING (See reverse):

 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHUR COLOR:

 1 = YELLOW 2 = PURPLE

8. STEM:

 Anthocyanin: 1 = ABSENT 2 = PRESENT Waxy bloom: 1 = ABSENT 2 = PRESENT Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT Internodes: 1 = HOLLOW 2 = SOLID NO. OF NODES (Originating from node above ground) CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

 Anthocyanin: 1 = ABSENT 2 = PRESENT Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

 Flag leaf at booting stage: 1 = ERECT 2 = RECURVED Flag leaf: 1 = NOT TWISTED 2 = TWISTED
3 = OTHER (Specify) Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT MM. LEAF WIDTH (First leaf below flag leaf) CM. LEAF LENGTH (First leaf below flag leaf)

6

RECEIVED

OCT 21 1977